

MEMORANDUM

DEPARTMENT OF TRANSPORTATION

DATE September 24, 1973

SUBJECT PIN 7500.34.311, FILD 73-16
I-81, TEST WELLS - JEFFERSON COUNTY

FROM Lyndon H. Moore, Soil Mechanics Bureau, Room 102, Bldg. 7
By: Wesley P. Moody *Wesley Moody*

TO C. J. Lyman, Regional Director of Transportation, Region 7 ←

cc J. Sternbach, Construction Subdivision, Room 404, Bldg. 5
M. D. Graham, Facilities Design Subdivision, Room 405, Bldg. 5
Attention: J. J. Ryan

Enclosed is a copy of a test well report prepared by Arthur Klussendorf, Senior Engineering Geologist, describing work done on the subject project.

The recommendations contained therein will aid the State Architect to design the pumping system.

Please contact this Bureau if you have questions concerning this report.

LHM:EJL:MR
Attachment

#1 - 19' static level
#2 - 23' static level

MEMORANDUM
DEPARTMENT OF TRANSPORTATION

DATE September 17, 1973

SUBJECT FILD 73-16
INTERSTATE 505 TEST WELLS FOR PROPOSED COMFORT STATIONS
JEFFERSON COUNTY, PIN 7500.34-311

FROM ARTHUR B. KLUSSENDORF, Senior Engineering Geologist

TO WESLEY P. MOODY, Associate Soils Engineer

On August 16 and 17, 1973 the writer assisted Mr. William Monteith (EIC) in supervising the construction of Test Well No. 6. Wells No. 5 and No. 6 were drilled by order on Contract after Well No. 4 came up dry. Wells No. 1 and No. 2 are located at the NB site and wells No. 3 thru No. 6 are located at the SB site.

Copies of drillers' logs, pump test data and chemical, physical and bacteriological tests are attached. This data has already been forwarded to the State Architect.

Recommendations for location of pump intake and maximum pumping rate for each well are as follows:

Northbound Rest Area

1. Test Well No. 1
 - a) Pump Intake - 50 to 75 feet below original ground
 - b) Pumping Rate - not to exceed 25 gpm
2. Test Well No. 2
 - a) Pump Intake - 50 to 75 feet below original ground
 - b) Pumping Rate - not to exceed 25 gpm

Southbound Rest Area

3. Test Well No. 3
 - a) Pump Intake - 150 to 175 feet below original ground
 - b) Pumping Rate - not to exceed 12 gpm
4. Test Well No. 4

Abandoned - advised E.I.C. to seal hole

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50 Wolf Road, POD 34
Albany, New York 12232

NEW YORK, N.Y. 10001
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W. P. Moody
Page Two
September 17, 1973

5. Test Well No. 5

Abandoned - advised E.I.C. to seal hole

6. Test Well No. 6

- a) Pump Intake - 150 to 175 feet below original ground
- b) Pumping Rate - not to exceed 12 gpm

Care should be exercised that pump intakes not be set deeper, nor pumping rates higher than those recommended because of the possibility of pulling in salt water.

Well No. 1 (NB) should be used as the production well because of the higher chloride content of Well No. 2 (NB). Either Well No. 3 (SB) or Well No. 6 (SB) may be used as the production well with no preference.

If 12 gpm is not sufficient, at the Southbound site, additional development and testing would be required to justify an increase in the pumping rate for these wells.

ABK:vav

EXHIBIT NO. II

Record of well pumping test

CONTRACT NO. FILD 73-16. Sheet No. 1 of 2

Date August 25, 1973

OWNER NYS Dept. Of Transportation, Region 7, Watertown, N.Y.
(Name and Address)

WELL NO. 1 LOCATION Route 81-Northbound, Jefferson County.

TEST DATA:

PERFORMED BY: Tully Drilling Co., Inc.

DATE STARTED: 8/13/73 DATE ENDED 8/14/73 PERIOD 24 HOURS

WELL DATA:

TYPE: Drilled Water Well Completed in Rock

TOTAL DEPTH: 200 FEET DIAMETER 6"

DESCRIBE WELL

CASING: 18'-10" Casing, 29'-6" Casing Grouted in Rock

ELEVATION TOP OF CASING OR OTHER REFERENCE POINT 2' Above Grade

STATIC WATER LEVEL (BELOW REF. PT.): 19 feet

REMARKS: One Foot of Casing installed after Pump Test.

PUMPING EQUIPMENT:

TYPE OF TEST PUMP: 5 HP, 220 Volt, 3 Phase Red Jacket

Submersible Pump w/30 KW Cat. Generator

CAPACITY: 65 GPM TDH: 450 FEET

OVERALL PUMP SETTING: 175 feet

HOW WAS FLOW OF WATER MEASURED? 3" Discharge Pipe with

1 3/4" Orifice

HOW WAS WATER LEVEL DETERMINED? Electric Probe

LENGTH OF WATER LEVEL DETECTOR TUBE: none

REMARKS: Water Samples taken for Complete Analysis

SUBMITTED BY: _____ TITLE Vice Pres.

RECORD OF WELL PUMPING TEST

TULLY DRILLING CO., INC.

Sheet No. 2 of 2.

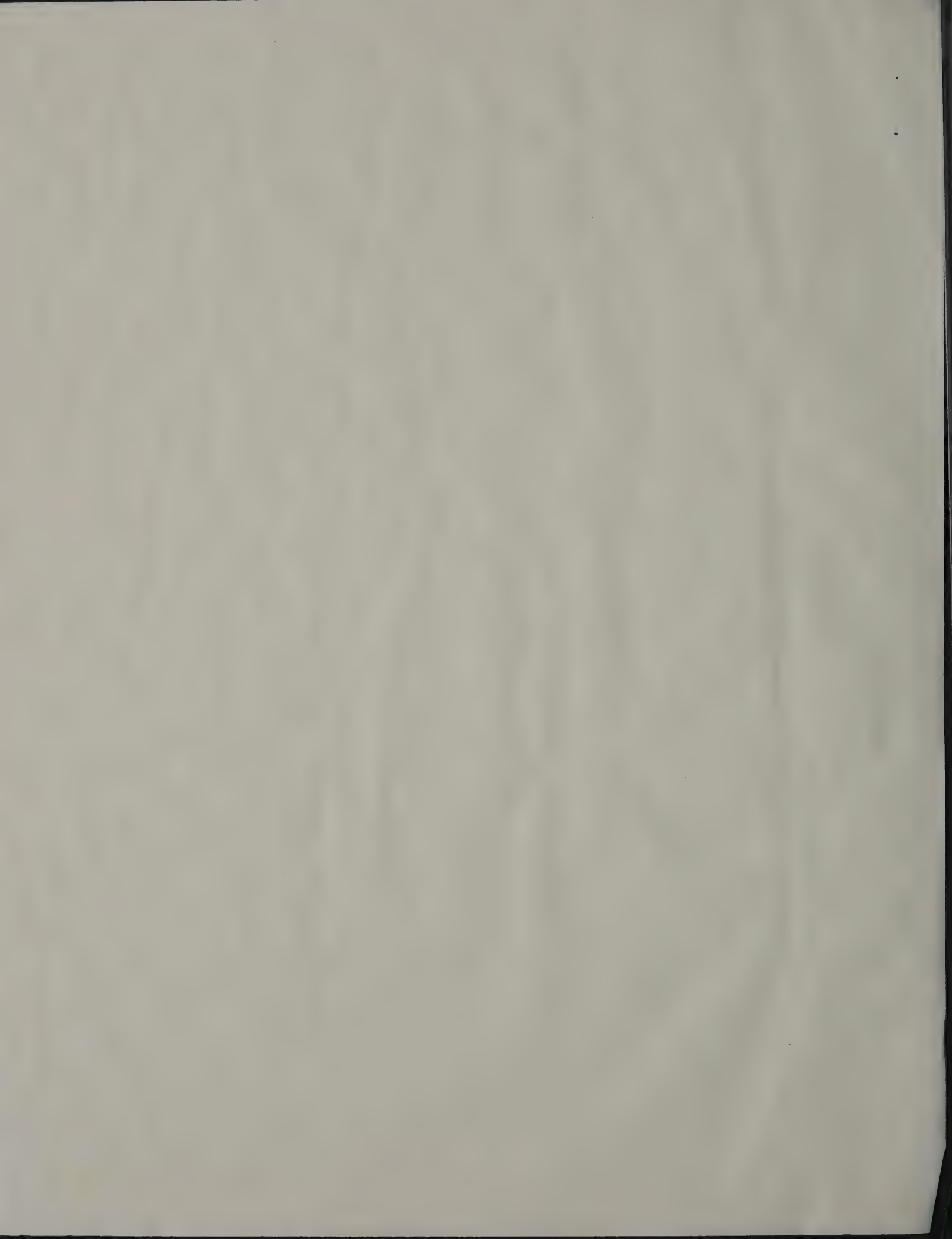
Date August 25, 1973

OWNER: NYS Dept. of Transportation, Region 7, Watertown, N.Y.
(Name and Address)

WELL NO. 1 LOCATION: Route 81-Northbound, Jefferson County.

TEST RESULTS:

TIME	GPM	WATER LEVEL (Feet Below Ref.Pt.)	DRAWDOWN (Feet)	WATER
3:25 PM		19'	Static Level	
3:27	64	21'	2 ft.	Clear
3:40	64	23'	4 ft.	"
4:00	64	24'	5 ft.	"
4:25	64	25'	6 ft.	"
5:30	64	26'	7 ft.	"
6:30	64	26.5'	7.5 ft.	"
7:00	64	27'	8 ft.	"
8:00	64	27'	8 ft.	"
9:00	64	27'	8 ft.	"
10:00	64	27'	8 ft.	"
11:00	64	27'	8 ft.	"
12:00 M	64	27'	8 ft.	"
1:00 AM	64	27'	8 ft.	"
2:00	64	27'	8 ft.	"
3:00	64	27'	8 ft.	"
4:00	64	27'	8 ft.	"
5:00	64	27'	8 ft.	"
6:00	64	27'	8 ft.	"
7:00	64	27'	8 ft.	"
8:00	64	27'	8 ft.	"
9:00	64	27'	8 ft.	"
10:00	64	27'	8 ft.	"
11:00	64	27'	8 ft.	"
12:00 N	64	27'	8 ft.	"
1:00 PM	64	27'	8 ft.	"
2:00	64	27'	8 ft.	"
3:00	64	27'	8 ft.	"
3:30	64	27'	8 ft.	"
RECOVERY: 1 min.		23'		
5 "		19'	Static Level	



39 ALLENDALE ROAD
BINGHAMTON, N. Y. 13903
722 - 0030

COSTELLO'S LABORATORY INC.

SUCCESSOR TO NELSON & LAUDER
CHARLES V. COSTELLO
CONSULTING SANITARY CHEMIST

LABORATORY FOR
SANITARY & ANALYTICAL
CHEMISTRY

RESULTS OF EXAMINATION OF WATER

LABORATORY NO: C 13/74 COLLECTED BY Tully Drilling Co.
DATE COLLECTED 8/15/73 RECEIVED 8/15/73 REPORTED 8/20/73
PLACE Watertown N. Y. COUNTY _____
(CITY, TOWN, VILLAGE OR HAMLET)
SAMPLING POINT Well # 1 Contract # 73-16
OWNER _____ TENANT _____

BACTERIAL EXAMINATION

TEST FOR COLIFORM GROUP

BACTERIA PER ML. AGAR, 35°C - 24 HRS. _____ M. P. N. * / 100 ML _____

THIS WATER WAS _____ OF A SATISFACTORY SANITARY QUALITY WHEN THE SAMPLE WAS COLLECTED

PHYSICAL EXAMINATION

COLOR 1 TURBIDITY 3 ODOR + COLD Neg. + HOT _____

CHEMICAL EXAMINATION

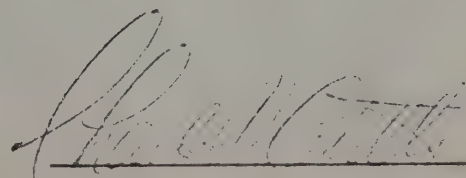
RESULTS IN PARTS PER MILLION

IRON (FE) <u>.06</u>		AMMONIA FREE (AS N) _____		OXYGEN CONSUMED (O) _____	
MANGANESE (MN) <u>Neg.</u>	NITROGEN CONSTITUENTS	ALB. AMMONIA (AS N) _____	CHLORIDES (CL) <u>10</u>		
as Rec'd		NITRITES (AS N) _____	TOTAL HARDNESS (AS CaCO ₃) <u>245</u>		
CARBON DIOXIDE (CO ₂) <u>5.0</u>		NITRATES (AS N) <u>.06</u>	ALKALINITY (AS CaCO ₃) <u>229</u>		
FLOURIDES (F) _____		LOSS OF IGNITION _____	CALCIUM (AS CaCO ₃) <u>185</u>		
TOTAL SOLIDS <u>344</u>		SULFATES <u>42</u>	MAGNESIUM (AS CaCO ₃) <u>60</u>		
BICARBONATES _____		COPPER _____	ELECTROMETRIC PH VALUE <u>7.2</u>		
SILICA _____		ORTHO PHOSPHATES _____	META PHOSPHATES _____		
TOTAL PHOSPHATES _____		TEMPT AIR ° F _____	TEMPT WATER ° F _____		
SUSPENDED MATTER _____					
DETERGENTS _____					

REMARKS:

* MOST PROBABLE NUMBER

+1=VERY SLIGHT, 2=SLIGHT, 3=DISTINCT, 4=DECIDED, 5=EXTREME



CHARLES V. COSTELLO

Costello's Laboratory, Inc.
Charles V. Costello
Consulting Chemist

30 Alondale Road
Binghamton, N. Y. 13903
Phone: (607) 722-0030

RESULTS OF EXAMINATION OF WATER

LAB NO. 469/73

COLLECTED BY Tully Drilling Co.

DATE COLLECTED 8/14/73

DATE REPORTED 8/18/73

NAME OF SUPPLY Well Supply

OWNER'S NAME NYSDOT Contract 73-15

ADDRESS Watertown, N. Y.

SAMPLING POINT Test Pump Discharge

BACTERIA PER ML 160

(AGAR PLATE COUNT AT 35°)

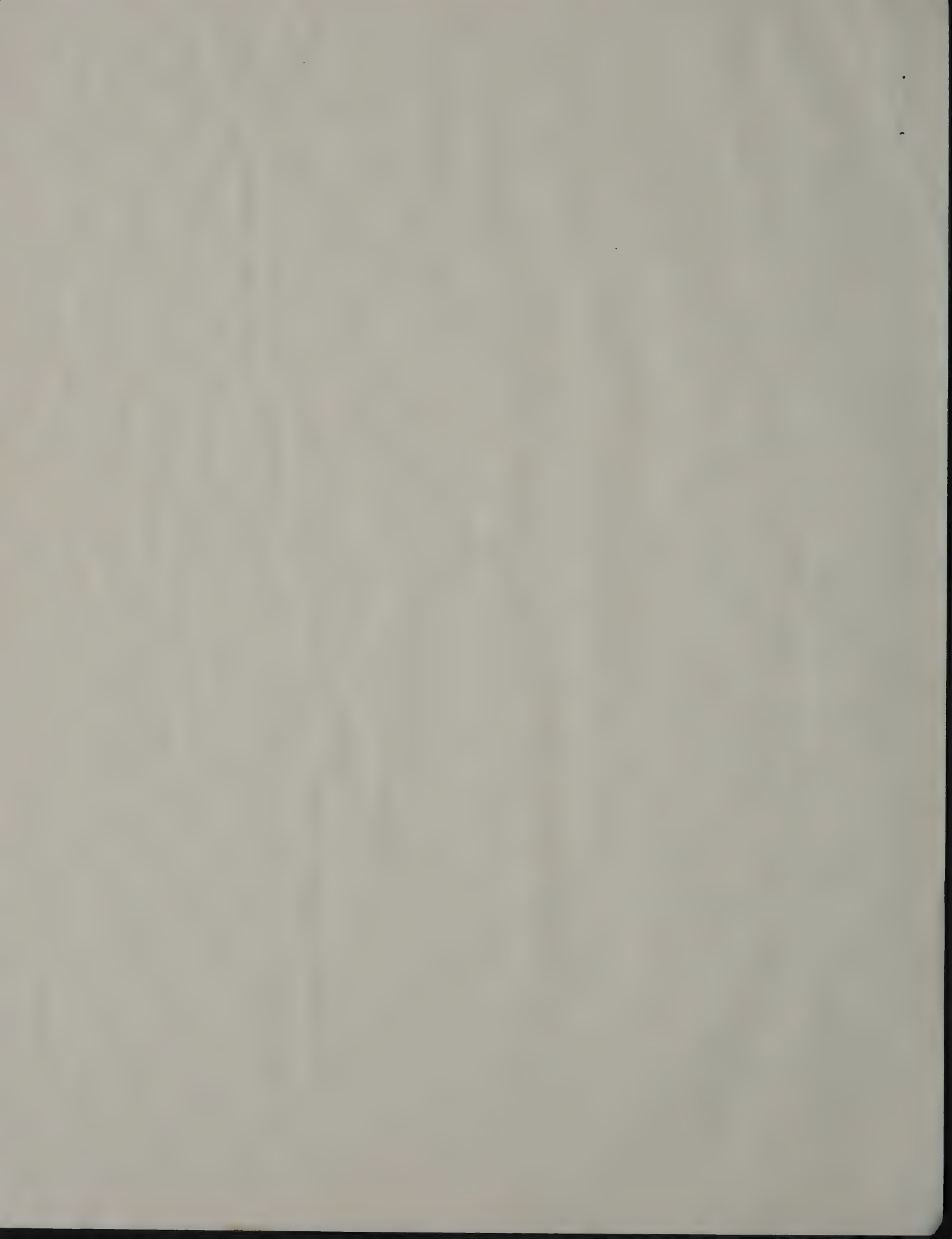
COLIFORM GROUP Negative

MPN NO/100 ML less than 2.2 OK

THE RESULTS INDICATE THAT THE WATER WAS
OF A SATISFACTORY SANITARY QUALITY WHEN THE SAMPLE WAS
COLLECTED.

REMARKS:

Charles V. Costello



LOG OF WELL

2

Test No.

County, State of Alaska

Total depth to bottom of Well 99'

Diameter Test Hole 6"marks and opinion of Test

Well developed by air from drill to 75 G.P.M.

Reverse
Rotary
Cable Tool
Wash
Other?

Frank Matarese Jr.

Driller



Record of well pumping test

CONTRACT NO. FILD 73-16 Sheet No. 1 of 2

Date August 25, 1973

OWNER NYS Dept. Of Transportation, Region 7, Watertown, N.Y.
(Name and Address)

WELL NO. 2 LOCATION Route 81-Northbound, Jefferson County.

TEST DATA:

PERFORMED BY: Tully Drilling Co., Inc.

DATE STARTED: 8/14/73 DATE ENDED 8/15/73 PERIOD 24 HOURS

WELL DATA:

TYPE: Drilled Water Well Completed in Rock

TOTAL DEPTH: 99 FEET DIAMETER 6"

DESCRIBE WELL

CASING: 25'-6" Casing Driven one foot in Rock.

ELEVATION TOP OF CASING OR OTHER REFERENCE POINT 2' Above Grade

STATIC WATER LEVEL (BELOW REF. PT.): 23 feet

REMARKS: One foot of casing installed after Pump Test.

PUMPING EQUIPMENT:

TYPE OF TEST PUMP: 5 HP, 220 Volt, 3 Phase Red Jacket

Submersible Pump w/30 KW Cat. Generator.

CAPACITY: 65 GPM TDH: 450 FEET

OVERALL PUMP SETTING: 68 feet

HOW WAS FLOW OF WATER MEASURED? 3" Discharge Pipe with
1 3/4" Orifice.

HOW WAS WATER LEVEL DETERMINED? Electric Probe

LENGTH OF WATER LEVEL DETECTOR TUBE: none

REMARKS: Water Samples taken for Complete Analysis.

SUBMITTED BY: _____ TITLE Vice Pres.



RECORD OF WELL PUMPING TEST

TULLY DRILLING CO., INC.

Sheet No. 2 of 2.

Date August 25, 1973.

OWNER: NYS Dept. of Transportation, Region 2, Saratoga, N.Y.
(Name and Address)

WELL NO. 2 LOCATION: Route 81-Northbound, Jefferson County.

TEST RESULTS:

TIME	GPM	WATER LEVEL (Feet Below Ref.Pt.)	DRAWDOWN (Feet)	WATER
4:30 PM		23'	Static Level	
4:32	64	25'	2 ft.	Clear
4:35	64	27'	4 ft.	"
4:45	64	27'	4 ft.	"
5:00	64	27'	4 ft.	"
6:00	64	27'	4 ft.	"
7:00	64	27'	4 ft.	"
8:00	64	27'	4 ft.	"
9:00	64	27'	4 ft.	"
10:00	64	27'	4 ft.	"
11:00	64	27'	4 ft.	"
12:00 M	64	27'	4 ft.	"
1:00 AM	64	27'	4 ft.	"
2:00	64	27'	4 ft.	"
3:00	64	27'	4 ft.	"
4:00	64	27'	4 ft.	"
5:00	64	27'	4 ft.	"
6:00	64	27'	4 ft.	"
7:00	64	27'	4 ft.	"
8:00	64	27'	4 ft.	"
9:00	64	27'	4 ft.	"
10:00	64	27'	4 ft.	"
11:00	64	27'	4 ft.	"
12:00 N	64	27'	4 ft.	"
1:00	64	27'	4 ft.	"
2:00	64	27'	4 ft.	"
3:00	64	27'	4 ft.	"
4:00	64	27'	4 ft.	"
4:30	64	27'	4 ft.	"
RECOVERY:	1 min.	24 ft.		
	5 "	23 ft.	Static Level	



30 ALLENDALE ROAD
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COSTELLO'S LABORATORY INC.
SUCCESSOR TO NELSON & LAUDER
CHARLES V. COSTELLO
CONSULTING SANITARY CHEMIST

LABORATORY FOR
SANITARY & ANALYTICAL
CHEMISTRY

RESULTS OF EXAMINATION OF WATER

LABORATORY NO. C 14/74 COLLECTED BY Tully Drilling Co.
DATE COLLECTED 8/15/73 RECEIVED 8/15/73 REPORTED 8/29/73
PLACE Watertown N. Y. COUNTY _____
(CITY, TOWN, VILLAGE OR HAMLET)
SAMPLING POINT Well # 2 North Bound
OWNER NYSDOT TENANT _____

BACTERIAL EXAMINATION

TEST FOR COLIFORM GROUP

BACTERIA PER ML. AGAR, 35°C - 24 HRS. _____ M. P. N. * / 100 ML _____

THIS WATER WAS _____ OF A SATISFACTORY SANITARY QUALITY WHEN THE SAMPLE WAS COLLECTED

PHYSICAL EXAMINATION

COLOR 5.0 TURBIDITY 2.0 ODOR + COLD Veg. + HOT _____

CHEMICAL EXAMINATION

RESULTS IN PARTS PER MILLION

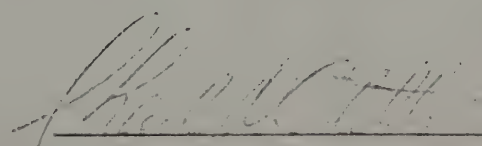
IRON (Fe) <u>.05</u>	AMMONIA FREE (AS N) _____	OXYGEN CONSUMED (O) _____
MANGANESE (MN) <u>NEG.</u> as Rec'd	ALB. AMMONIA (AS N) _____	CHLORIDES (Cl) <u>262</u>
CARBON DIOXIDE (CO ₂) <u>5.0</u>	NITRITES (AS N) _____	TOTAL HARDNESS (AS CaCO ₃) <u>255</u>
FLOURIDES (F) _____	NITRATES (AS N) <u>.18</u>	ALKALINITY (AS CaCO ₃) <u>246</u>
TOTAL SOLIDS <u>323</u>	LOSS OF IGNITION _____	CALCIUM (AS CaCO ₃) <u>182</u>
BICARBONATES _____	SULFATES <u>35</u>	MAGNESIUM (AS CaCO ₃) <u>73</u>
SILICA _____	COPPER _____	ELECTROMETRIC PH VALUE <u>7.2</u>
TOTAL PHOSPHATES _____	ORTHO PHOSPHATES _____	META PHOSPHATES _____
SUSPENDED MATTER _____	TEMPY AIR ° F _____	TEMPY WATER ° F _____
DETERGENTS _____		

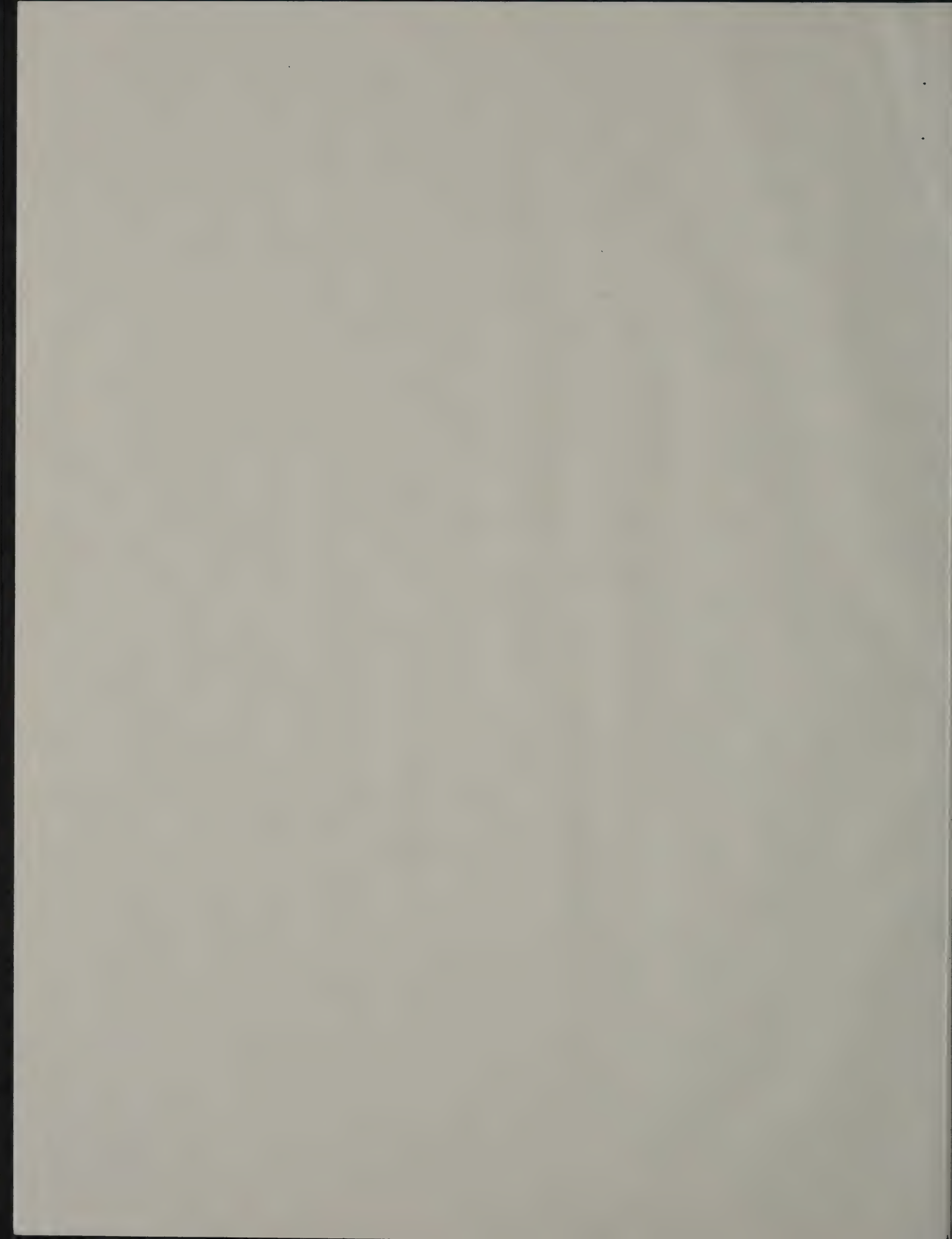
NITROGEN
CONSTITUENTS

REMARKS:

* MOST PROBABLE NUMBER

+1=VERY SLIGHT, 2=SLIGHT, 3=DISTINCT, 4=DECIDED, 5=EXTREME


CHARLES V. COSTELLO



Costello's Laboratory, Inc.
Charles V. Costello
Consulting Chemist

30 Allendale Road
Binghamton, N. Y. 13903
Phone: (607) 722-0030

RESULTS OF EXAMINATION OF WATER

LAB NO. 410/73

COLLECTED BY Tully Drilling Company

DATE COLLECTED 8/15/73 - 11:00 AM

DATE REPORTED 8/17/73

NAME OF SUPPLY No. 2 North Bend

OWNER'S NAME New York State Dept. of Transportation

ADDRESS Watertown, New York

SAMPLING POINT New test well

BACTERIA PER ML 1

(AGAR PLATE COUNT AT 35°)

COLIFORM GROUP Negative

MPN NO/100 ML Less than 2.2

.....

.....

.....

.....

THE RESULTS INDICATE THAT THE WATER WAS
OF A SATISFACTORY SANITARY QUALITY WHEN THE SAMPLE WAS
COLLECTED.

REMARKS:

.....

.....
Charles V. Costello



LOG OF WELL

Test No. 1000

Driller



Record of well pumping test

CONTRACT NO. FILD 73-16 , Sheet No. 1 of 2

Date August 25, 1973

OWNER NYS Dept. of Transportation, Section 2, Saratoga, N.Y.
(Name and Address)

WELL NO. 3 LOCATION Route 81-Southbound, Jefferson County.

TEST DATA:

PERFORMED BY: Tully Drilling Co., Inc.

DATE STARTED: 8/16/73 DATE ENDED 8/17/73 PERIOD 24 HOURS

WELL DATA:

TYPE: Drilled Water Well Completed in Rock.

TOTAL DEPTH: 250 FEET DIAMETER 6"

DESCRIBE WELL

CASING: 79'-6" Casing Driven one foot in Rock.

ELEVATION TOP OF CASING OR OTHER REFERENCE POINT 2' Above Grade.

STATIC WATER LEVEL (BELOW REF. PT.): 22 feet.

REMARKS: One foot of Casing Installed after Pump Test.

PUMPING EQUIPMENT:

TYPE OF TEST PUMP: 3/4 HP. 220 Volt, 1 Phase Jacuzzi

Submersible Pump w/30 KW Cat. Generator.

CAPACITY: 16 GPM TDH: 330 FEET

OVERALL PUMP SETTING: 160 feet.

HOW WAS FLOW OF WATER MEASURED? Water Meter.

HOW WAS WATER LEVEL DETERMINED? Electric Probe.

LENGTH OF WATER LEVEL DETECTOR TUBE: none

REMARKS: Water Samples taken for Complete Analysis.

SUBMITTED BY: _____ TITLE Vice Pres.



RECORD OF WELL PUMPING TEST

TULLY DRILLING CO., INC.

Sheet No. 2 of 2

Date August 25, 1973

OWNER: NYS Dept. of Transportation, 61 W. 7th, Madisontown, N.Y.
(Name and Address)

WELL NO. 3 LOCATION: Route 81-Southbound, Jefferson County.

TEST RESULTS:

TIME	GPM	WATER LEVEL (Feet Below Ref. Pt.)	DRAWDOWN (Feet)	WATER
		Meter	Static Level	
10:00 AM		1352580	20'	
10:05	11		33'	Clear
10:10	11		36'	"
10:15	11		40'	"
10:30	11		46'	"
10:45	11		50'	"
11:00	11	1353240	52'	"
11:30	11		54'	"
12:00 N	10.5		56'	"
12:30 PM	10		57'	"
1:00	10	1354485	58'	"
2:00	10		58'	"
3:00	10		59'	"
4:00	10		59'	"
5:00	10		60'	"
6:00	10	1357488	69'	"
7:00	10		74'	"
8:00	10		76'	"
9:00	10		64'	"
10:00	10		60'	"
11:00	10		59'	"
12:00 M	10	1361100	59'	"
1:00 AM	10		59'	"
2:00	10		59'	"
3:00	10		59'	"
4:00	10		59'	"
5:00	10		59'	"
6:00	10	1364730	39'	"
7:00	10		39'	"
8:00	10		39'	"
9:00	10		39'	"
10:00	10	1367150	39'	"

RECOVERY: 1 min. 48'
2 " 44'
5 " 40'
15 " 20'

*NOTE: Water Level Readings taken while No. 6 Well is Drilled through water bearing rock strata.



30 ALLENDALE ROAD
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722 - 0030

COSTELLO'S LABORATORY INC.

SUCCESSOR TO NELSON & LAUDER
CHARLES V. COSTELLO
CONSULTING SANITARY CHEMIST

LABORATORY FOR
SANITARY & ANALYTICAL
CHEMISTRY

RESULTS OF EXAMINATION OF WATER

LABORATORY NO. C 75/74 COLLECTED BY Tully Drilling Co.
DATE COLLECTED 8/17/73 RECEIVED 8/17/73 REPORTED 8/20/73
PLACE Washington N. Y. COUNTY _____
(CITY, TOWN, VILLAGE OR HAMLET)
SAMPLING POINT W-1-1
OWNER W. J. Morris TENANT _____

BACTERIAL EXAMINATION

TEST FOR COLIFORM GROUP

BACTERIA PER ML. AGAR, 35°C - 24 HRS. _____ M. P. N. * / 100 ML Less than 2.2 CX

THIS WATER WAS _____ OF A SATISFACTORY SANITARY QUALITY WHEN THE SAMPLE WAS COLLECTED

PHYSICAL EXAMINATION

COLOR 2 TURBIDITY 1 ODOR + COLD Ver. + HOT _____

CHEMICAL EXAMINATION

RESULTS IN PARTS PER MILLION

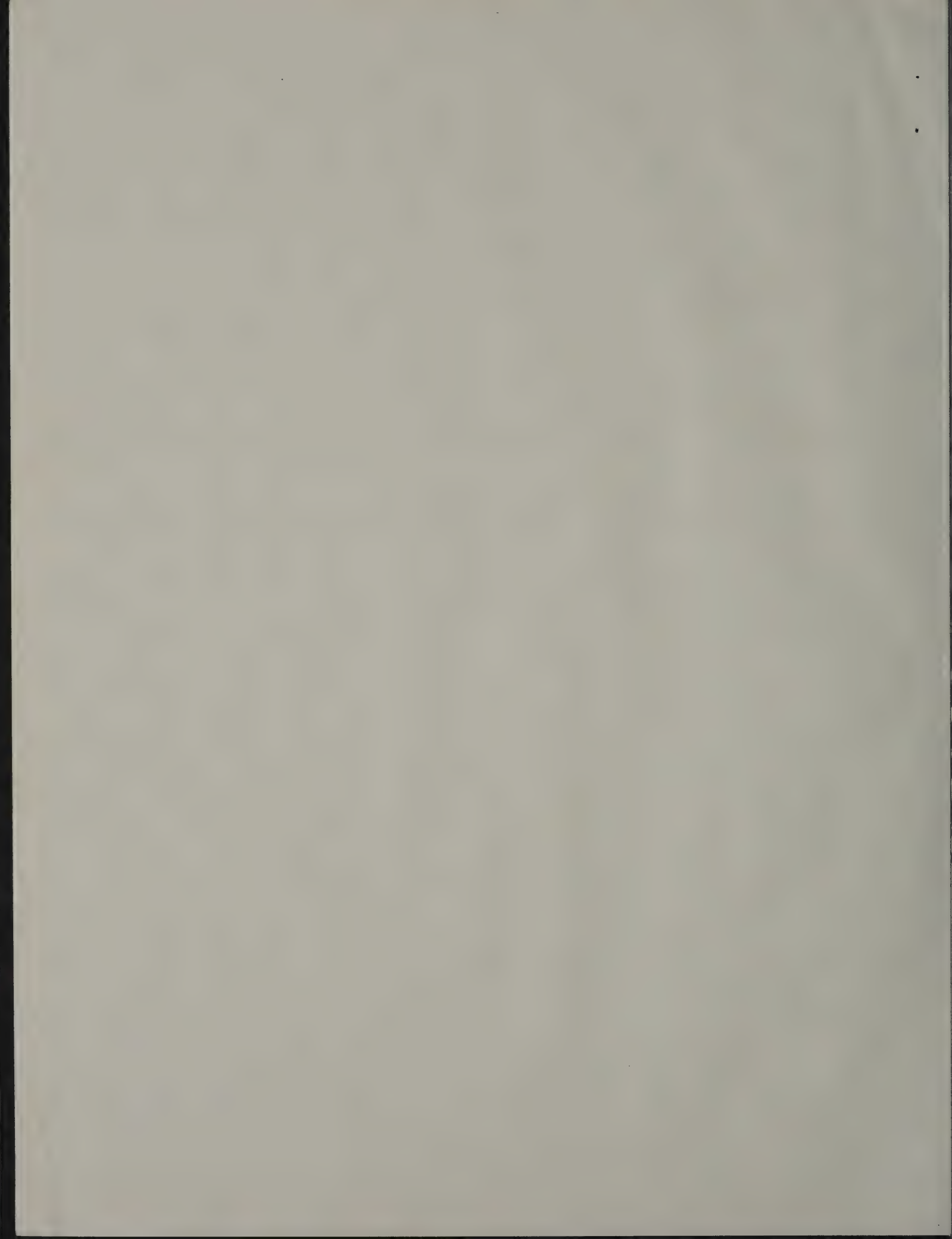
IRON (Fe) <u>.05</u>	AMMONIA FREE (AS N) _____	OXYGEN CONSUMED (O) _____
MANGANESE (Mn) <u>neg.</u>	ALB. AMMONIA (AS N) _____	CHLORIDES (Cl) <u>10</u>
as Rec'd	NITRITES (AS N) _____	TOTAL HARDNESS (AS CaCO ₃) <u>160</u>
CARBON DIOXIDE (CO ₂) <u>3.0</u>	NITRATES (AS N) <u>.07</u>	ALKALINITY (AS CaCO ₃) <u>151</u>
FLOURIDES (F) _____	LOSS OF IGNITION _____	CALCIUM (AS CaCO ₃) <u>72</u>
TOTAL SOLIDS <u>174</u>	SULFATES <u>22</u>	MAGNESIUM (AS CaCO ₃) <u>88</u>
BICARBONATES _____	COPPER _____	ELECTROMETRIC PH VALUE <u>7.35</u>
SILICA _____	ORTHO PHOSPHATES _____	META PHOSPHATES _____
TOTAL PHOSPHATES _____	TEMPT AIR ° F _____	TEMPT WATER ° F _____
SUSPENDED MATTER _____		
DETERGENTS _____		

REMARKS:

* MOST PROBABLE NUMBER

1=VERY SLIGHT, 2=SLIGHT, 3=DISTINCT, 4=DECIDED, 5=EXTREME

CHARLES V. COSTELLO



Portugal, Pa.

marks and opinion of Test

Well doesn't produce any water- Contractor placed concrete plug in well.

CHECK TYPE OF
RIG USED

Frank Matarese jr.

Driller



20. 10. 1910

W. A. No.

Tr. No. _____

Date Test Hole Completed August 15, 1973

Remarks and opinion of Test

CHECK TYPE OF
RIG USED

Reverse
Rotary
Cable Tool
Wash
Other?

Driller



LOG OF WELL

6

Test No.

Driller

Record of well pumping test

CONTRACT NO. FILD 73-16 Sheet No. 1 of 2

Date August 25, 1973

OWNER NYS Dept. of Transportation, Region 2, Albany, N.Y.
(Name and Address)

WELL NO. 6 LOCATION Route 81-Southbound, Jefferson County.

TEST DATA:

PERFORMED BY: Tully Drilling Co., Inc.

DATE STARTED: 8/20/73 DATE ENDED 8/21/73 PERIOD 24 HOURS

WELL DATA:

TYPE: Drilled Water Well Completed in Rock.

TOTAL DEPTH: 200 FEET DIAMETER 6"

DESCRIBE WELL

CASING: 78'-6" Casing Driven one foot in Rock.

ELEVATION TOP OF CASING OR OTHER REFERENCE POINT: Same as above.

STATIC WATER LEVEL (BELOW REF. PT.): 15 feet

REMARKS: One foot of Casing Installed after Pump Test.

PUMPING EQUIPMENT:

TYPE OF TEST PUMP: 5 HP, 220 Volt, 3 Phase Red Jacket

Submersible Pump w/30 KW Cat. Generator.

CAPACITY: 65 GPM TDH: 450 FEET

OVERALL PUMP SETTING: 170 feet.

HOW WAS FLOW OF WATER MEASURED? Water Meter.

HOW WAS WATER LEVEL DETERMINED? Electric Probe.

LENGTH OF WATER LEVEL DETECTOR TUBE: none

REMARKS: Water Samples taken for Complete Analysis.

SUBMITTED BY: TITLE Vice Pres.

RECORD OF WELL PUMPING TEST

TULLY DRILLING CO., INC.

Sheet No. 2 of 2

Date August 25, 1973

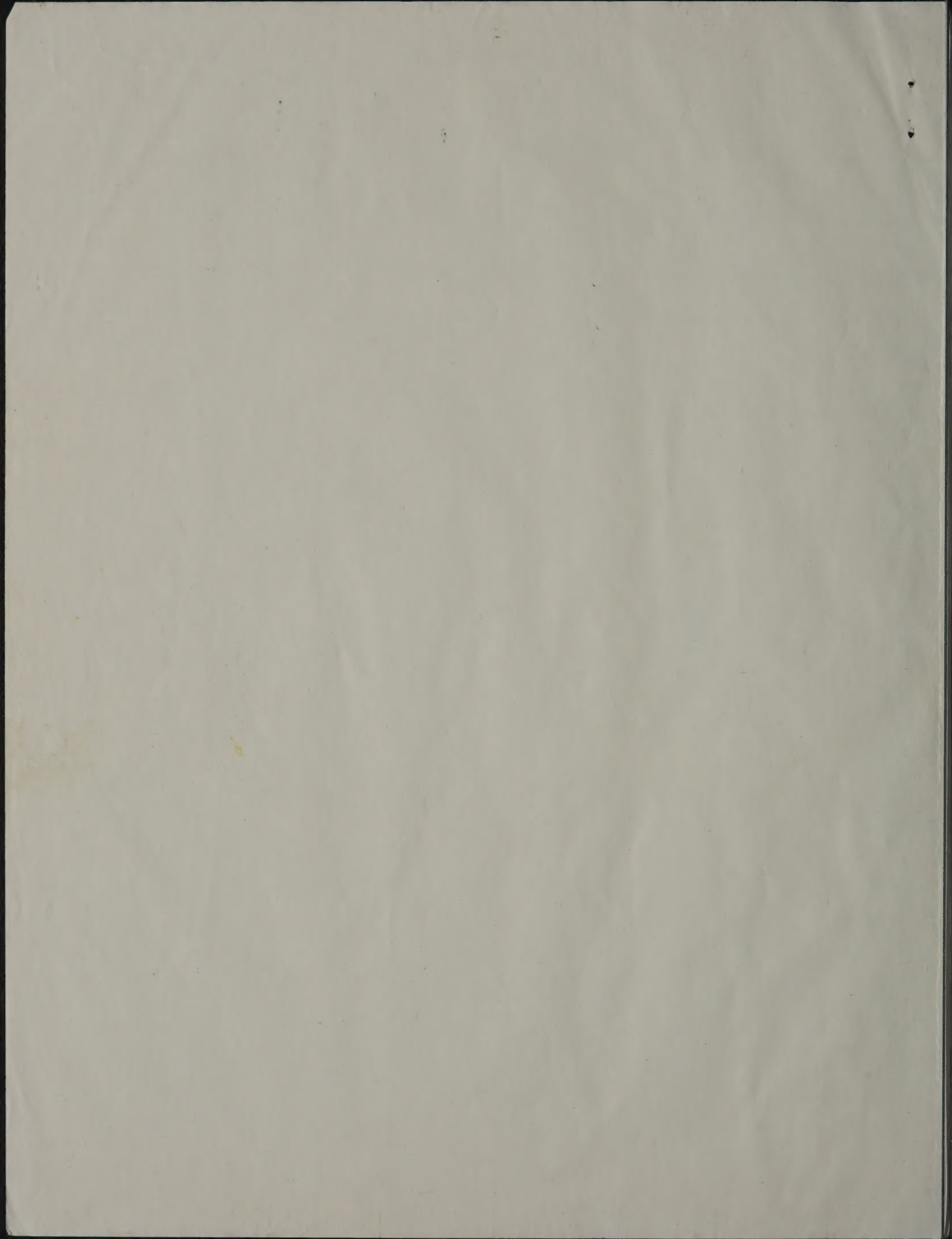
OWNER: NYS Dept. of Transportation, Region 7, Watertown, N.Y.
(Name and Address)

WELL NO. 6 LOCATION: Route 81-Southbound, Jefferson County.

TEST RESULTS:

TIME	GPM	WATER LEVEL (Feet Below Ref.Pt.)	DRAWDOWN (Feet)	WATER
12:40 PM	Meter 1367150	16'	Static Level Well 3.**	
12:42	30	50'	34'	Clear
12:45	25	84'	68'	"
1:00	22	103'	87'	"
1:30	22	128'	112'	"
2:00	22	136'	120'	"
2:30	21	143'	127'	"
3:00	21	148'	132'	"
3:30	20	149'	133'	"
4:00	20 1371450	150'	134'	"
4:30	20	150'	134'	"
5:00	20	150'	134'	"
6:00	20 1373240	150'	134'	"
7:00	19	150'	134'	"
8:00	19	150'	134'	"
9:00	19	150'	134'	"
10:00	19	150'	134'	"
11:00	18	150'	134'	"
12:00-M	18 1380000	150'	134'	"
1:00 AM	18	150'	134'	"
2:00	18	150'	134'	"
3:00	18	150'	134'	"
4:00	18	150'	134'	"
5:00	18	150'	134'	"
6:00	18 1387075	150'	134'	"
7:00	18	150'	134'	"
8:00	18	150'	134'	"
9:00	18	150'	134'	"
10:00	18	150'	134'	"
11:00	18	150'	134'	"
12:00 N	18	150'	134'	"
12:45	18 1394970	150'	134'	"
RECOVERY: 1 min.		130'	36'	
5 "		45'	30'	
15 "		26'	21'	
30 "		16'	20'	

*NOTE: Water level noted while pumping No. 6 well.



30 ALLENDALE ROAD
BINGHAMTON, N. Y. 13903
722 - 0030

COSTELLO'S LABORATORY INC.

SUCCESSOR TO NELSON & LAUDER
CHARLES V. COSTELLO
CONSULTING SANITARY CHEMIST

LABORATORY FOR
SANITARY & ANALYTICAL
CHEMISTRY

RESULTS OF EXAMINATION OF WATER

LABORATORY NO. C 18/74 COLLECTED BY Thomas Tully
DATE COLLECTED 8/23/73 RECEIVED 8/23/73 REPORTED 8/25/73
PLACE Watertown N. Y. COUNTY _____
(CITY, TOWN, VILLAGE OR HAMLET)
SAMPLING POINT New Well # 65 B 81 Pump Discharge
OWNER NYS DOT TENANT _____

BACTERIAL EXAMINATION

TEST FOR COLIFORM GROUP

BACTERIA PER ML. AGAR, 35°C - 24 HRS. 1 M. P. N. * / 100 ML. less than 2.2 OX

THIS WATER WAS _____ OF A SATISFACTORY SANITARY QUALITY WHEN THE SAMPLE WAS COLLECTED

PHYSICAL EXAMINATION

COLOR 1.0 TURBIDITY 1.0 ODOR + COLD Var. + HOT _____

CHEMICAL EXAMINATION

RESULTS IN PARTS PER MILLION

IRON (Fe) .04
MANGANESE (Mn) neg.
as Rec'd
CARBON DIOXIDE (CO₂) 4.0
FLOURIDES (F) _____
TOTAL SOLIDS 175
BICARBONATES 184
SILICA _____
TOTAL PHOSPHATES _____
SUSPENDED MATTER Neg.
DETERGENTS _____

NITROGEN
CONSTITUENTS

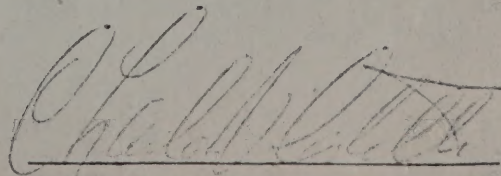
AMMONIA FREE (AS N) _____
ALB. AMMONIA (AS N) _____
NITRITES (AS N) _____
NITRATES (AS N) .06
LOSS OF IGNITION _____
SULFATES 25
COPPER _____
ORTHO PHOSPHATES _____
TEMPT AIR ° F _____

OXYGEN CONSUMED (O) _____
CHLORIDES (Cl) 25
TOTAL HARDNESS (AS CaCO₃) 125
ALKALINITY (AS CaCO₃) 154
CALCIUM (AS CaCO₃) 78
MAGNESIUM (AS CaCO₃) 47
ELECTROMETRIC PH VALUE 7.3
META PHOSPHATES _____
TEMPT WATER ° F _____

REMARKS:

* MOST PROBABLE NUMBER

+1=VERY SLIGHT, 2=SLIGHT, 3=DISTINCT, 4=DECIDED, 5=EXTREME



CHARLES V. COSTELLO

$$A = \pi r^2$$

$$A = \frac{22}{7} \times (.25)^2 =$$

$$\begin{array}{r} .25 \\ .25 \\ \hline 50 \\ 50 \\ \hline 100 \\ 22 \times .0625 \\ \hline 1.375 \\ 7.5 \sqrt{1.375} \\ 150 \\ \hline 875 \\ 450 \\ \hline 925 \end{array}$$

$$\begin{array}{r} 1.0625 \\ 16 \overline{) 1.000} \\ 96 \\ \hline 40 \\ 32 \\ \hline 80 \\ 80 \\ \hline 0 \end{array}$$

102464 G per FT.

$$7.5 \sqrt{.198 \text{ CF / FT}}$$

$$\begin{array}{r} 27.5 \\ 7.5 \\ \hline 1375 \\ 550 \\ \hline 78.75 \\ 60 \\ \hline 472500 \end{array}$$

$$\begin{array}{r} 147 \\ 1.47 \\ \hline 145.53 \end{array}$$

$$\begin{array}{r} 1.47 \\ 99 \end{array}$$

$$\begin{array}{r} 40. \\ 102464 \overline{) 1.00000} \\ 9856 \\ \hline 1440 \end{array}$$

01039



LRI